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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,856	01/11/2001	Dale C. Flanders	1028-CO	8212

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EXAMINER

JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 07/09/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/757,856

Applicant(s)

FLANDERS ET AL.

Examiner

John A. Jeffery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claimed Subject Matter Not in Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP 608.01(o). Correction of the following is required: Although the newly-added claim limitation "wedge-shaped" describing the fiber lens can be reasonably ascertained by one of ordinary skill in the art from the figures (i.e., does not constitute new matter), the term must be added to the specification for proper support. Applicant is cautioned against the inclusion of new matter.

Claim Rejections - 35 USC § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-5, 7-11, and 16 are rejected under 35 U.S.C. 103(a) as being obvious over Honmou (US5563969) in view of Irie et al (US6301406). Honmou (US5563969) discloses a method and apparatus for fusing an optical fiber lens including injecting light into the fiber via laser 5, detecting the far-field image pattern via detector 6 mounted

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about 10 cm from the end surface of the fiber (col. 3, line 53), and using the recognized image as a control signal to control the discharge of electrodes for fiber electro-fusion using control system 2. See Fig. 3 and entire document. While the reference is silent as to the far-field pattern being a diffraction pattern, in view of (1) the detector's image recognition capability and ability to produce a picture signal (col. 3, lines 54-58), and (2) the nature and characteristics of the far-field pattern detected resulting from light exiting the fiber end, the detector 6 inherently detects the diffraction pattern. If such inherency is disputed, then the detection of a diffraction pattern from the far-field image detected by detector 6 would have been obvious to one of ordinary skill in the art in view of the nature and characteristics of the image of the far-field pattern detected resulting from light exiting the fiber end. The claims differ from the previously cited prior art in calling the fiber to have a wedge-shaped lens formed by polishing. Providing a wedge-shaped fiber lens is conventional and well known in the art as evidenced by Irie et al (US6301406) noting wedge-shaped lens 26 formed on the end of optical fiber 20 for improved optical coupling efficiency, yet can be fabricated with high accuracy and yield. See col. 1, lines 57-63 and col. 2, lines 42-57. According to col. 2, lines 63-67, the wedge-shaped lens is formed by polishing the fiber. In view of Irie et al (US6301406), it would have been obvious to one of ordinary skill in the art to provide a wedge-shaped lens formed by polishing in the previously described apparatus in order to improve optical coupling efficiency, yet fabricate the lens with high accuracy and yield.

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Claims 6, 12, 14, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honmou (US5563969) in view of Irie et al (US6301406) and further in view of Fanning (US47583886). The claims differ from the previously cited prior art in calling for the controller to activate the arc fuser in a pulsed fashion. Controlling an arc fuser in a fiber lens producing apparatus is conventional and well known in the art as evidenced by Fanning (US47583886) noting Col. 1, lines 12-15 wherein Fanning (US47583886) teaches that, in a lens-making process, the arc can be more closely controlled by repeatedly turning it on and off. In view of Fanning (US47583886), it would have been obvious to one of ordinary skill in the art to activate the arc fuser in a pulsed fashion in the previously described apparatus so that the arc can be more closely controlled by repeatedly turning it on and off. The claims also differ from the previously cited prior art in calling for the controller to determine a ratio of lateral size to a transverse size of the diffraction pattern. Honmou (US5563969) in Col. 3, line 54 - Col. 4, line 23 teaches using the far-field pattern diameter as the parameter to compare to a preset value for control purposes. In view of Honmou's use of a size parameter of the pattern for control purposes, no criticality is seen in the use of a ratio of sizes as claimed in claims 6 and 14. Selecting either the size value of the diameter of the pattern or a ratio of size values of the pattern is mere engineering design preference within the level of one of ordinary skill in the art. Furthermore, it is well settled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955). Here, the use of a ratio in lieu of a

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single diameter value would constitute the discovery of the optimum pattern size values for electro-fusion control purposes; such a discovery would be obtainable via routine experimentation.

Other Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The art should be both separately considered and considered in conjunction with the previously cited prior art when responding to this action. US 024, JP 763, JP 177 disclose fibers with wedge-shaped lenses relevant to the instant invention.

Response to Arguments

Applicant's arguments have been considered but are deemed to be moot in view of the new grounds of rejection. However, Applicant continues to maintain the position that Honmou does not teach the fusing system or method of the instant invention. In particular, Applicant argues on Page 5 that because "diameter is a one-dimensional parameter," Honmou allegedly does not teach fusing in response to a two-dimensional parameter.

For the reasons outlined in the previous office action mailed 11/29/02 (Paper No. 9), the examiner respectfully disagrees. As noted previously, diameter represents the size and shape of a circular, two-dimensional shape. Rather than repeat the previously-made arguments, the examiner incorporates by reference the arguments of the previous

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office action. Accordingly, those arguments apply with equal force to the claims as amended.

Final Rejection

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this or earlier communications from the examiner should be directed to John A. Jeffery at telephone number (703) 306-4601 or fax (703) 305-3463. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM EST. The examiner can also be reached on alternate Fridays.

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The fax phone numbers for the organization where this application or proceeding is assigned are:

Before Final	(703) 872-9302
After Final	(703) 872-9303
Customer Service	(703) 872-9301

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0861.



**JOHN A. JEFFERY
PRIMARY EXAMINER**

7/7/03